

REMARKS

Reconsideration and allowance are respectfully requested.

Claims 1-21 stand rejected under 35 U.S.C. §103 as allegedly being unpatentable based on US 5,892,758 (Argyroudis) and US 6,710,721 (Holowick). This rejection is respectfully traversed.

The Examiner is thanked for the interview conducted on December 2, 2008. A general discussion of the claims, Argyroudis, Holowick, and potential amendments were discussed. In accordance therewith, claim 1 is amended to recite that the concentrator and remote meters communicate over a power line of an electricity distribution network. In particular, the concentrator transmits program data including information defining a sequence of program instructions to at least one of the remote meters over one or more power lines of the electricity distribution network. Example support is found in original claim 17 (now canceled) and in many places in the specification, e.g., page 8, lines 8-21, page 10, line 34-page 11, line 3, and page 12, lines 8-15. Claim 1 also includes subject matter of from claim 7 (now canceled). Similar amendments are made to independent claims 20 and 21. New dependent claims 22-24 find example support in original claims 8 and 9.

Argyroudis discloses a wireless remote telemetry system. Figure one shows meter units 102a-102n communicating with a home radio base station 122 over a radio interface using CDMA spread spectrum techniques. A vehicle 128 for wirelessly receiving that telemetry data is even used in rural areas where there is sparse cellular coverage. The HBU relays the telemetry data to a central controller 116. As disclosed at the top of column 9, meter reporting times of the remote metering units can be scheduled actively by the central controller 116 to prevent message reporting overload and message collisions. The central controller 116 generates scheduling

messages for delivery to each remote metering unit 102a-102n. These messages are transmitted over a radio paging channel 104 of the wireless communication system. Examples of scheduling messages are a broadcast instruction for each remote metering unit 102a-102n to transmit their respective reporting messages at a randomly selected time. Another example is a specific interrogation of a specific remote metering unit 102a.

Argyroudis's active scheduling does not teach a concentrator "transmitting program data including information defining a sequence of program instructions" to a remote meter. Indeed, the Examiner admits that Argyroudis's meter reading commands are not program instructions for updating a program stored in the remote units and relies on Holowick. Like Argyroudis, Holowick is also a radio frequency meter reading system. See the one way RF transmitter 36 and antenna 142 used to transmit meter information at a radio frequency of 916.5 MHz. The Holowick goal is to eliminate "elaborate polling methodology employed in conventional mobile data collection units." Col. 9, lines 1-13. Since the meter reporting apparatus is transmit only, Holowick needs a portable infrared (IR) programming module 42 for adjusting operating parameters of the meter controller 20, e.g., the time interval between the RF transmissions of the meter data. Because of the infrared link, the programming module 42 must be brought in physical proximity to the optical port 40 by a human operator.

So Holowick's programming approach follows an entirely different approach than the claimed approach which carries out a program update of a remote meter via the concentrator "successively transmitting program data messages each comprising a portion of said program data" to at least one of the remote meters over one or more power lines of the electricity distribution network.

The Examiner previously admitted that Holowick's programming module 42 is not a concentrator. Nor does it make sense in Holowick to replace the IR programming module 42 with a concentrator since the meter reading is not performed by the IR programming module 42 and because the programming module 42 would not function particularly well as a concentrator given that is human operated device that must be brought in physical proximity to each meter.

Even if the proposed combination could be made, it would not lead to the subject matter claimed. The combination fails to teach "said concentrator transmits program data including information defining a sequence of program instructions to at least one of said remote meters over the one or more power lines of the electricity distribution network," as recited in claim 1. The combination also fails to disclose or suggest the following features performed by the concentrator, also recited in claim 1:

- "successively quer[ying] over the one or more power lines of the electricity distribution network each of said plural meters whether it has received the successively transmitted program data messages comprising different portions of said program data;"
- "if a queried meter reports one or more missing or incorrectly received program data messages, retransmit[ting] in a broadcast mode the one or more program data messages reported by the queried meter to be incorrect or missing; and"
- "each of said plural meters receiv[ing] those one or more program data messages during said retransmission which the respective meter has missed or incorrectly received."

Neither reference appreciates problems associated with sending a sequence of program instructions to remote meters over the one or more power lines of the electricity distribution

network. That noisy communications environment may well corrupt information transmitted over the power lines. As a result, the inventors recognized the importance of breaking the sequence of program instructions into portions each of which is sent as a stand alone message that includes an identifier so that the message portions can be reassembled in the receiving meter into the proper sequence of program instructions. After downloading the program sequences to selected meters, the concentrator queries each of them to see if they received each of the successively transmitted messages correctly (not received or corrupted when received). Each queried meter that has not received each of the successively transmitted messages correctly sends a report to the concentrator that causes the concentrator to retransmit in broadcast mode to all of those reporting meters the messages reported as not received correctly. Each of those meters then receives the retransmitted messages. This is more efficient than retransmitting particular messages to each of the meters individually.

Neither reference addresses the problems associated with power line program instruction download to remote meters because power line data communications are not used in either reference. Accordingly, there is no reason why a person of ordinary skill in the art would even think to try and modify Argyroudis and Holowick in an attempt to move towards what is claimed. Again, these two references employ a very different approach to remote metering.

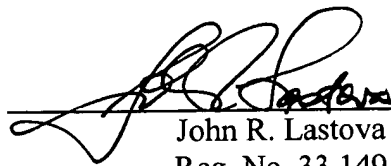
The application is in condition for allowance. An early notice to that effect is requested.

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Appl. No. 10/564,749
December 19, 2008

Respectfully submitted,

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